

The Competitive, Crowdsourced Investment (CCI) Initiative


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This article proposes an initiative for consideration by the acquisition community. The suggestion is not endorsed by the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics or any other organization of the Department of Defense.

Within the private sector, investment capital flows to the businesses that can best generate returns for investors. A result of this incentive structure is a business culture that relentlessly turns capital into future returns.

Within the Department of Defense (DoD), weapon system investment funds—those used for modernization or replacement of existing weapon systems—are allocated to the highest defense priorities. This incentive structure means that DoD acquisition culture focuses on creating the most capable weapon systems. Yet, if DoD acquisitions are to remain affordable in the future, DoD needs to assign greater importance to cost.

Wallace, a colonel in the U.S. Air Force, is director of the Comparative Technology Office in the Office of the Secretary of Defense. The author would like to acknowledge a few of the many people who provided inspiration and countless hours to develop and refine the ideas in this work, including, from the National Defense University, Richard Shipe, Ph.D., professor of Acquisition and Land Combat Systems; Mark Foulon, professor of Business and Industry; Moshe Schwartz, adjunct professor; and, from the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, Sally Sleeper, Ph.D., senior advisor for Manufacturing and Industrial Base Policy.

The background of the page is a complex network diagram. It features a series of interconnected circles, some of which are replaced by glowing lightbulbs. The circles and lines are white, set against a dark blue background with vibrant, multi-colored light streaks in shades of red, orange, yellow, and green. The lightbulbs are also glowing, adding to the overall luminous effect of the design.

To create a culture that balances cost with capability, I propose that the DoD allocate some investment funds to generate future cost savings. Unlike previous and existing practices, this proposed investment program would use the power of competition to effect a desired cultural change within the acquisition community. The opportunity to win additional funds would incentivize program managers (PMs) to improve their weapon systems in a manner similar to how business leaders look for the high-return investments. This would increase the importance of cost in acquisition culture.

Previous Efforts

The Reduction in Total Ownership Costs (RTOC) program provided selected programs with funding in 1999–2011 in order to “maintain or improve current readiness while reducing operations and support [O&S] costs.” Programs reported achieving life-cycle cost savings far in excess of the investment. A report on RTOC by the Institute of Defense Analyses (IDA) proposed a

framework for encouraging cost reduction across the DoD life-cycle management enterprise. Step 1 in the framework was to “establish an affordability culture encompassing all stakeholders”—a statement indicating that this attribute is not yet present within the Defense Acquisition System.

RTOC program successes demonstrated that it is possible to reduce operating costs with investment funds by improving weapon systems. Exactly how much high-return investment is possible in the DoD is unknown and would make for an interesting study. However, the real challenge isn’t to reallocate limited investment funds to cost savings; there will never be enough to invest in both the desired capability needs and effective cost reductions. Instead, the DoD should leverage competition to encourage the permeation of the DoD acquisition culture with business thinking focused on return on investment (ROI). The resulting cultural shift will affect DoD affordability beyond any single investment program.

Competitive, Crowdsourcing Investment

This proposal offers that a fixed amount of Research, Development, Test and Evaluation dollars be set aside for competition between military Services and DoD agencies. A project would be selected as the winner based primarily on the competing Service or agency's proposal to make high-return cost improvements. ROI would be measured by the projected cost savings over a fixed time divided by the total cost of implementing the update, just as investors seek to turn their current assets into future cash flows in private markets. The total cost of any improvement should cover procurement and logistics, man-hours, and, to encourage the most realistic business thinking, the cost of capital.

The real strength of this proposal is not simply the achieved return of these funds; it is the opportunity to reinforce the importance of cost savings and instill business thinking in the acquisition community. To facilitate this cultural change as effectively as possible, this initiative has three key attributes: competition, crowdsourced decision making, and streamlined management.

Competition

Cost savings would be encouraged by having program offices compete to win development funds based on their projected ability to produce ROI. The immediate effect would be to fund programs now that will save funds in the future. By emphasizing competition, the DoD would be rewarding the best business cases rather than the most important programs and, in the longer term, would be investing in development of a business culture within the acquisition community.

Because funds typically are assigned to solve a particular problem, rather than competed against objective criteria, PMs currently are in the business of efficiently spending the resources assigned to achieve the desired capability.

However, there is no reason for cost-saving investments to be divided among the Services from the top down. Were PMs allowed to win funds based on their likely ROI, the DoD would allocate funds in the way the private sector does, where investors put money into projects that generate the highest rates of return. Unlike the DoD budget allocation, the funds awarded competitively might not always go toward the most important defense capability requirements. However, in terms of the entire DoD budget, a dollar saved operating a critical, advanced weapon system provides the same affordability increase as a dollar saved operating less critical systems.

Furthermore, the opportunity to compete and win on the basis of one's innovative ideas provides an individual incentive and a distinguishing, measurable achievement. If an engineer or logistician becomes known for generating successful proposals, one could predict that PMs would compete for the services of that person. Within a personnel system with few avenues to provide recognition of superior performance,

An Example

Imagine that a small company has developed and patented a new design for a hydraulic pump that can be easily adjusted to a variety of volume/pressure needs, is simple to produce, and promises at least twice the lifetime of current technology for the same cost. How should the DoD leverage this new technology? With the CCI, the company will work with a program office that can make the best business case for qualifying this new pump for its weapon system, as that program office would have the best chance of winning CCI funds. Assuming the project is funded and successful, it will be noticed by other program offices. Other PMs will examine their own cost structures to determine if they could propose using the same technology to increase the affordability of their weapon system. Each program office, attempting to make its proposal more attractive, will leverage previous testing to reduce investment costs and increase the projected return. With each successive application, the technology will become more robust and cheaper to qualify, until all the systems for which the business case makes sense have adopted the technology. The process will repeat as new, cost-saving technologies are developed, matured and implemented, just as innovation spreads through the private sector.

competition for limited funds provides an opportunity to identify capable and motivated personnel. Finally, support contractors, original equipment manufacturers and suppliers would all be encouraged to present cost-saving proposals to the program offices in order to win additional funds. One could imagine small businesses that focused on introducing cost savings across the DoD and winning CCI funds for program offices. A key part of the decision of a small company to bring its technology to the DoD would be the business case, rather than the importance of the system or funds available to the program. Encouraging entities within the private sector to compete for DoD funds based on the business case of their proposals is just what DoD needs in order to remain affordable.

Crowdsourced Decisions

The next question for a competitive program proposal is "who chooses?" This dilemma presents another opportunity. A requirement that peers vote on cost-saving proposals will cause PMs to review and evaluate each other's proposals. This kind of crowdsourced decision-making would contrast with the typical, highest-paid person's opinion (HIPPO) in the room that now dominate DoD decision making. Using the crowd will involve more of the acquisition community, increase the cultural impact of the initiative and reduce the additional bureaucracy required to manage this effort. Additionally, if some types of proposals are seen as the best ideas, reviewing PMs likely will apply the same ideas in their programs to better compete in the next round. Clearly, plagiarism of cost-saving ideas should be encouraged! The hope is that the best ideas will be adopted quickly and spread, just

as firms quickly copy those companies that produce successful inventions in the private sector.

Additionally, the important 1986 Packard report on DoD acquisition noted that increased latitude should be given to PMs. Due to the significant bureaucracy associated with the Defense Acquisition System, PMs often are constrained as to where and when they can allocate resources. By allowing PMs to vote on proposals, the CCI initiative would empower them to more directly affect their programs and leverage their on-the-ground knowledge to help make good decisions for the enterprise. Finally, PMs are statutorily defined the same way across the Services, but they rarely work together as a community.

The CCI program would create a common space within which PMs would develop and evaluate proposals. The primary criterion for evaluation would be ROI but also would include factors such as schedule risk and technical risk. The PMs, regardless of which military Service was involved, would be asked to vote by evaluating listed factors. Allowances would be made to permit horizontal communication among the PMs so they could share the rationale behind their choices and provide feedback to other PMs on the progress of their CCI programs. PMs who already are extremely busy likely would task out the evaluation of the proposals to their Program Support Managers (PSMs), engineers or project staffs, who would most significantly benefit from reviewing others' proposals.

A "secret ballot" concept would instruct PMs to vote in accordance with their evaluation of the criteria and prevent external influence from forcing them to support Service or agency priorities. In addition, every PM submitting a project would have to vote twice. In this way, the PMs' first votes likely would go to their own entries, but their second votes must be for programs other than their own. Each PM would then have to vote for a program that, in the PM's opinion, best meets the evaluation criteria.

Streamlined Management

Finally, to implement the program with minimal overhead and to effectively establish the peer-voting decision making described above, the proposals will be created and tracked on a crowdfunding-like website similar to Kickstarter (www.kickstarter.com). Mounds of paperwork often are required to obtain even a little funding within the DoD. By streamlining the process, the CCI program directly addresses this "high barriers to entry" problem, well known as a factor that reduces competition.

Such a website would reduce the overhead cost in terms of time and energy associated with proposing a project. The primary opportunity to "sell" the project is a short, approximately 5-minute, video of the PM, PSM, or engineer explaining the approach and the expected benefits. Such a process might have been cost-prohibitive just 10 years ago, before the

widespread popularity of online videos, but video creation and Web hosting are trivial costs today.


Voting would take place through the website, and old proposals would remain as a resource so that future PMs, or their staffs, could easily leverage others' ideas when creating knock-off or follow-up proposals. Winning projects would be required to provide updates on their progress within the website until the funds are expended and future proposals from the same offices could link to their past successes, or failures. This would create an incentive for the projects to share the reasons for their successes or failures and how their follow-on projects would complement the past programs.

Such a system would minimize administration costs. The staff responsible for administration of CCI would be minimal; once the website is established and the projects selected, funds would be transferred to the appropriate program offices for obligation and execution. Obligation rates could be tracked on the website to determine if programs are on schedule. Reporting through this mechanism would eliminate additional bureaucracy and provide transparent tracking.

Finally, if successful, the PMs or program executive officers (PEOs) might then choose to use the platform to manage their own Service programs. A PEO could run a similar competition among their PMs or use the platform to obtain quarterly updates of numerous programs without expensive and time-intensive meetings. The ability to generate videos of acquisition strategy briefs, milestone decisions or program update briefings and upload them to such a website is new for the acquisition community but would appeal to the youngest engineers and managers now entering the workforce.

Readers are encouraged to browse the Kickstarter or other crowdfunding websites and review proposals for cost, schedule and performance information. I am certain they will find that some well-run programs quickly communicate their goals in an easy-to-understand format.

Conclusions

As former Secretary of Defense Chuck Hagel noted in his November 2014 Defense Innovative Initiative Memorandum, "We need to continue to further examine our business practices and find ways to be more efficient and effective." The current strategic context of increasing demands and reducing budgets stresses that we need to balance our defense capabilities with our costs, yet our current acquisition culture remains focused on capability. Directing funding to solve the most important capability challenges has created the current capability-focused acquisition culture. Investing in cost savings, if done correctly, will provide balance. If the DoD takes deliberate steps to align incentives and reward programs that create the highest returns, the acquisition community will respond. 

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